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ABSTRACT

Two types of information on the outcomes of education in New York State for the 1983-84 school year are presented. One relates to New York State tests and programs. The second is a by-product of national programs that identify outstanding pupils. During the 1983-84 school year, elementary and secondary school students demonstrated high achievement on all available indicators. The Pupil Evaluation Program results showed improvements in third-grade reading and mathematics and in fifth-grade writing. The percentage of students meeting the Regents Competency Testing requirements for a high school diploma remained high, and the percentage of graduates receiving Regents diplomas increased over the preceding year. New York State students compared favorably with their peers in other states. They led the nation in the Westinghouse Science Talent Search and in participation in the Advanced Placement Program. They performed well in the National Merit Scholarship Competition, and they scored well above the national average on all College Board achievement tests. Their Scholastic Aptitude Test scores improved and remained close to the national average despite the high proportion of seniors tested. (PN)

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Student Achievement in New York State

1983-84

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November 1984

Division of Educational Testing
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Albany, New York 12234

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Student Achievement in New York State: 1983-84

Evaluating a school, a school district, or an entire state system requires the analysis of several different groups of variables. One group includes the resources, both human and material, that go into the educational process. A second group of variables characterizes the process itself. A third group deals with the educational environment and climate in which the process takes place. The fourth group describes the outcomes.

This report contains information on the outcomes of education in New York State. Specifically, it describes student achievement in terms of test results and related indicators.

There are many intended outcomes of instruction that are not easily measured. Attitudes toward other cultures or toward civic responsibility, for example, do not lend themselves to any kind of school test. Thus, this report and, indeed, any report on student achievement is necessarily incomplete. Still, it provides all of the valid and reliable information on student achievement during the 1983-84 school year that is currently available.

Two kinds of information are presented. One relates to New York State tests and programs. State test scores may be used to analyze trends in achievement or to compare

schools and school districts within New York State. Included are the Pupil Evaluation Program (PEP) tests, the Regents Competency Tests, and the Regents examinations. In addition to State test results, selected graduation data are also provided.

The second is a by-product of national programs that identify outstanding pupils. These programs permit comparisons between New York State pupils and pupils in other states or in the United States as a whole. Two programs of the College Entrance Examination Board -- the Scholastic Aptitude Tests (SAT) and the achievement tests -- provide the best data of this type. Of more limited usefulness are the data obtained from the Advanced Placement Program, the National Merit scholarship competition, and the Westinghouse Science Talent Search.

In the sections that follow, the 1983-84 results for each available indicator are summarized and described.

State Testing Programs

Pupil Evaluation Program

The Pupil Evaluation Program was initiated in 1965 to provide data for use in planning, managing, and evaluating educational programs at both the State and local levels. With the advent of the Regents competency testing program, PEP test scores assumed new importance, because pupils scoring below a designated point -- the State Reference Point -- must be given remediation.

During 1983-84, the program involved the administration of criterion-referenced reading and mathematics tests to pupils completing grades 3 and 6 and the administration of a writing test to pupils completing grade 5. The tests were administered in all public and nonpublic schools containing grades 3, 5, or 6 in May 1984. Schools reported their scores to the Department, and the Department summarized the data and returned analyses to the schools.

Table 1 indicates the percentages of pupils scoring above the State Reference Points when the PEP tests were administered in May 1983 and May 1984. The data are arranged by type of school. The "Large City" districts are Albany, Buffalo, Rochester, Syracuse, and Yonkers. "Village-Suburban" districts

are all village school districts and those central districts with an enrollment of more than 2,500 pupils. The table shows improvement in the third- and fifth-grade test results and stability in the sixth-grade test results between 1983 and 1984.

Table 1: Percentages of Pupils Scoring Above State Reference Points on PEP Tests, 1983 and 1984

Type of School	Third-Grade Reading		Third-Grade Mathematics		Fifth-Grade Writing		Sixth-Grade Reading		Sixth-Grade Mathematics	
	1983	1984	1983	1984	1983	1984	1983	1984	1983	1984
Public										
New York City	54%	54%	58%	58%	75%	74%	54%	54%	54%	53%
Large City	64	67	72	74	71	78	63	63	68	69
Small City	79	80	81	83	79	83	76	78	75	78
Village-Suburban	86	87	88	90	83	88	84	85	83	85
Rural	84	86	86	88	82	86	83	84	82	84
Total Public	73	74	76	77	79	82	73	73	73	73
Nonpublic										
New York City	78	79	76	77	82	83	80	80	76	78
Other	89	88	88	88	88	89	88	87	86	87
Total Nonpublic	83	83	82	82	85	86	84	84	81	82
COMBINED TOTAL	75%	76%	77%	78%	80%	83%	75%	75%	74%	74%

Regents Examinations

For more than a century, Regents examinations have been a hallmark of high school education in New York State. Examinations are provided in 22 subjects, and more than one million papers are written during the January, June, and August examination periods. Almost sixty percent of the pupils in grades 9-12 take at least one Regents examination in a typical school year.

Regents examinations serve a number of purposes. They establish and maintain standards in the most-commonly studied high school subjects. They provide teachers with valid and reliable final examinations. They serve as good predictors of success in post-secondary education. They define important outcomes of instruction and help motivate pupil achievement.

The examinations are developed by classroom teachers in cooperation with the Department's subject and examination specialists. Each examination is based on a Department syllabus.

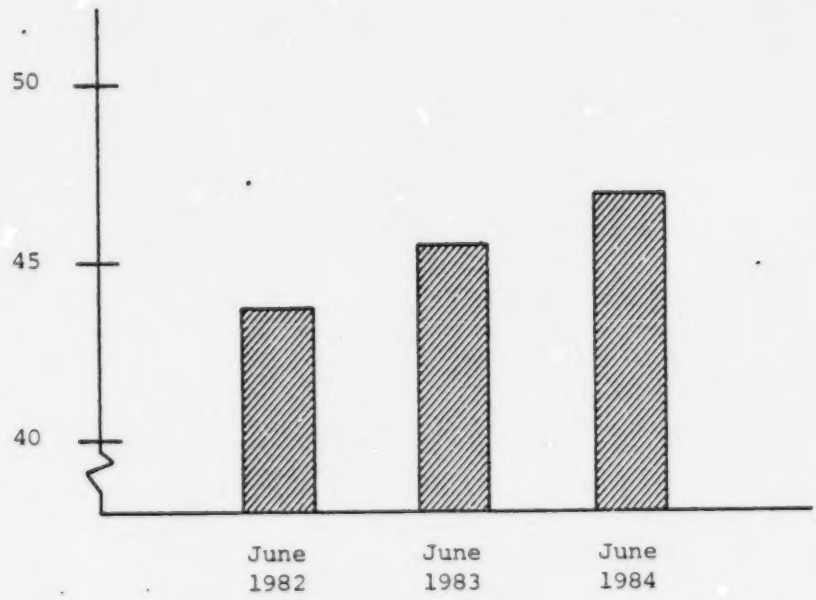
Table 2 lists the examinations provided in June 1984 and indicates, for each examination, the number of papers written and the percent of papers that received passing marks. Overall, 79.2 percent of the papers written were passing papers.

Table 2: Number of Papers Written and Percent Passing for the June 1984 Regents Examinations

Subject	Number of Papers Written	Percent Passing
Business Subjects		
Bookkeeping and accounting II	8,131	79.0%
Business law	13,055	80.3
Business mathematics	16,471	75.1
Shorthand II and transcription	5,942	71.4
English		
Comprehensive English	127,263	85.8
Foreign Languages		
Comprehensive French	19,481	91.0
Comprehensive German	2,829	91.7
Comprehensive Hebrew	2,116	92.5
Comprehensive Italian	4,507	91.0
Comprehensive Latin	2,552	84.3
Comprehensive Spanish	38,081	92.6
Mathematics		
Ninth year mathematics	85,898	71.1
Tenth year mathematics	69,088	76.1
Eleventh year mathematics	56,165	72.8
Sequential math, course I	62,676	83.7
Sequential math, course II	37,828	80.3
Sequential math, course III	21,668	83.6
Science		
Biology	114,068	72.8
Chemistry	74,943	78.2
Earth Science	37,175	79.8
Physics	42,344	81.9
Social Studies		
Comprehensive social studies	121,466	78.6
June Totals	963,747	79.2%

Figure 1 illustrates the percentages of high school graduates awarded Regents diplomas during the past three years. Of the students graduating from high school in June 1984, 46.9 percent were awarded Regents diplomas. This is an increase over the percentage awarded Regents diplomas in June 1983, which was 45.4.

Figure 1. Percent of High School Graduates Awarded Regents Diplomas



Regents Competency Tests

The Regents Competency Testing Program was established to assure that all pupils receiving high school diplomas have the reading, writing and mathematics skills needed for employment and postsecondary education. About one-half of the pupils graduating from high school each year demonstrate mastery of the basic skills by passing Regents examinations in English and mathematics. The other half take the Regents competency tests in reading, writing and mathematics.

The reading test is a Degrees of Reading Power test, as are the preliminary competency reading test and the third- and sixth-grade Pupil Evaluation Program reading tests. Degrees of Reading Power (DRP) tests indicate the most difficult prose that a pupil can read with comprehension. They are criterion-referenced tests, and their pass marks are related to the readability of textbooks used at designated grade levels.

The writing test is a direct measure of a pupil's ability to organize and present ideas in written form. The test consists of three different types of writing tasks: a business letter, a report, and a composition. In the scoring of the test, each answer is rated on the basis of its total effect and overall quality.

The mathematics test is designed to measure competency in the skills described in the syllabus, "General High School Mathematics." This is the recommended high school mathematics curriculum for pupils not enrolled in Regents mathematics courses. The test questions cover the core areas of: integers and rational numbers, including the fundamental operations of addition, subtraction, multiplication, and division of whole numbers, decimals, and fractions; graphing, including critical analysis and interpretation of graphs and charts; measurement of geometric figures; ratio, proportion, and percent; probability and statistics; and consumer and job-related mathematics.

Pupils take the Regents competency test in mathematics when they complete the prescribed course. For the vast majority of students, the test is taken initially at the end of grade nine. The reading and writing tests are intended to assess skills acquired during the high school years, and the tests may not be taken prior to the eleventh grade. Hence, most students take these tests initially in January of their junior year, although some are tested initially at the end of the junior year. Table 3 shows the results for these major administrations during the 1983-84 school year.

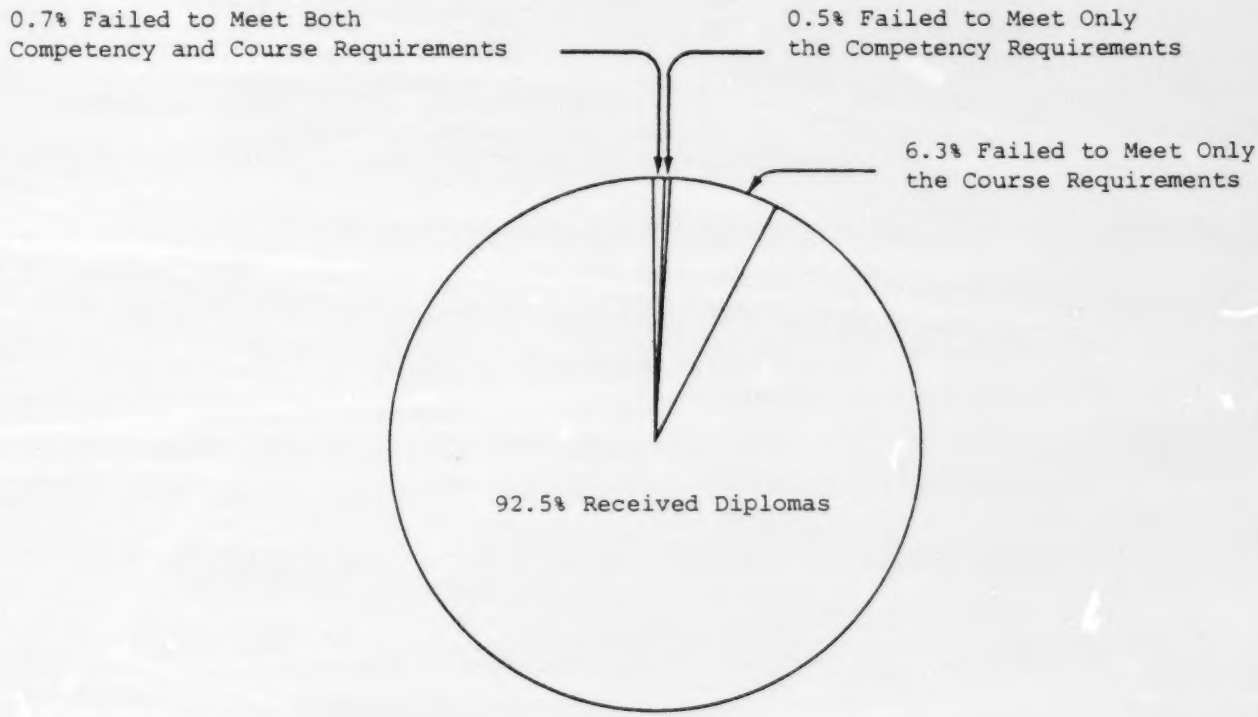
The mathematics test proved to be the most challenging. Only 69.7 percent of about 91,000 ninth-grade pupils passed the mathematics test in June 1984. Approximately 102,000 juniors took the reading and writing tests in January 1984; 93.0 percent passed the reading test, and 83.6 percent passed the writing test. Under the Commissioner's Regulations, pupils failing any competency test must be provided appropriate remediation.

Table 3: Number of Papers Written and Percent Passing for the Major Administrations of the Regents Competency Tests in 1984

Competency Test	Grade	Number of Papers Written	Percent Passing
January 1984			
Reading	11	101,488	93.0%
Writing	11	103,390	83.6
June 1984			
Reading	11	16,720	80.7
Writing	11	26,293	66.4
Mathematics	9	91,245	69.7

The competency testing requirement prevented few pupils from receiving high school diplomas in June 1984. Of the candidates for graduation in June 1984, 98.8 percent met the competency testing requirements. As illustrated in Figure 2, only 0.5 percent of the candidates failed to graduate solely because of the competency testing requirements. Another 0.7 percent failed to meet the competency testing requirements but also failed to meet course requirements. In all, only about 2,400 of the 204,000 diploma candidates failed to attain the standards in all three basic skills.

Figure 2: Candidates for High School Diplomas in June 1984


0.7% Failed to Meet Both
Competency and Course Requirements
0.5% Failed to Meet Only
the Competency Requirements
6.3% Failed to Meet Only
the Course Requirements
92.5% Received Diplomas

National Programs

Scholastic Aptitude Tests

As part of its Admissions Testing Program, the College Entrance Examination Board administers Scholastic Aptitude Tests (SAT's) to about one million college-bound seniors each year. SAT scores are used by many colleges to assist them in selecting candidates for admission.

There are two SAT's, a verbal test and a mathematical test. The verbal test measures vocabulary and reading comprehension skills. The mathematical test measures the ability to solve problems involving arithmetic reasoning, algebra, and geometry. The abilities measured by both tests are developed over years of study and use, both in and out of school.

Figures 3 and 4 illustrate the trends in SAT scores over the past seven years. During the period, both the State and national averages remained relatively stable, following a sharp decline over the preceding fourteen years. During the past seven years, New York's average score on each test has been within two points of the national average score. This average difference is extremely small in comparison to the range of state averages, which is about 150 points.

Figure 3: New York State and National Average Scores on the SAT-Verbal, 1978-1984

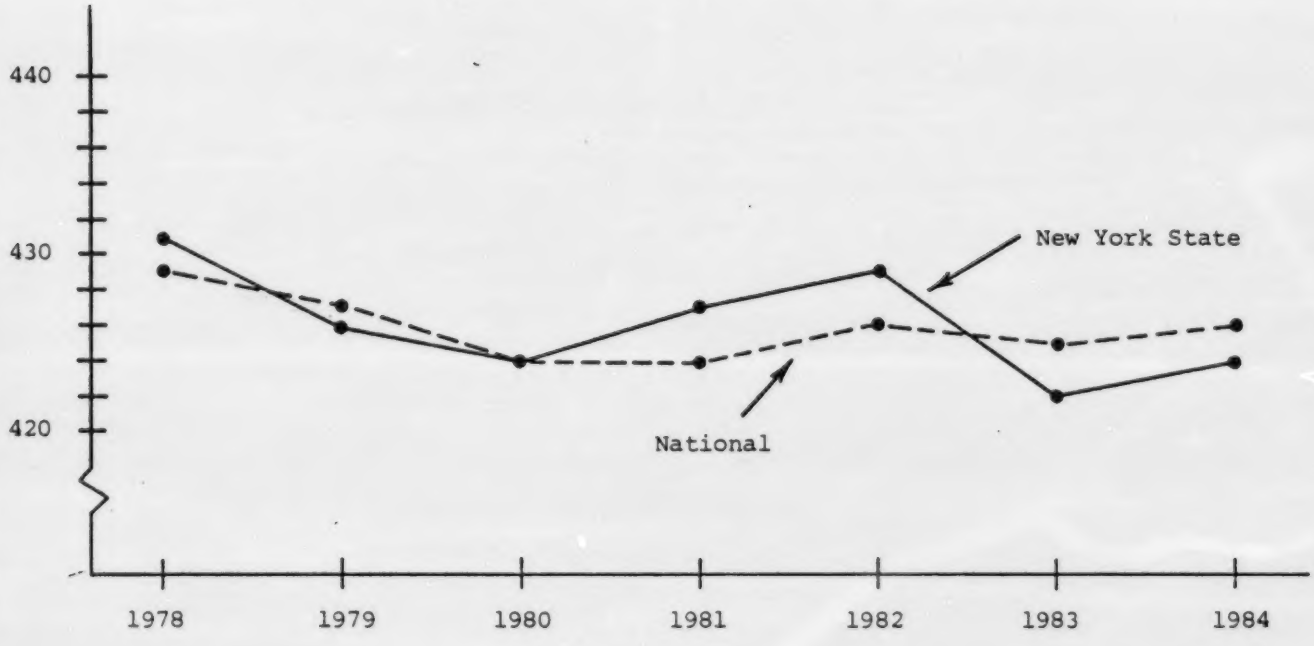
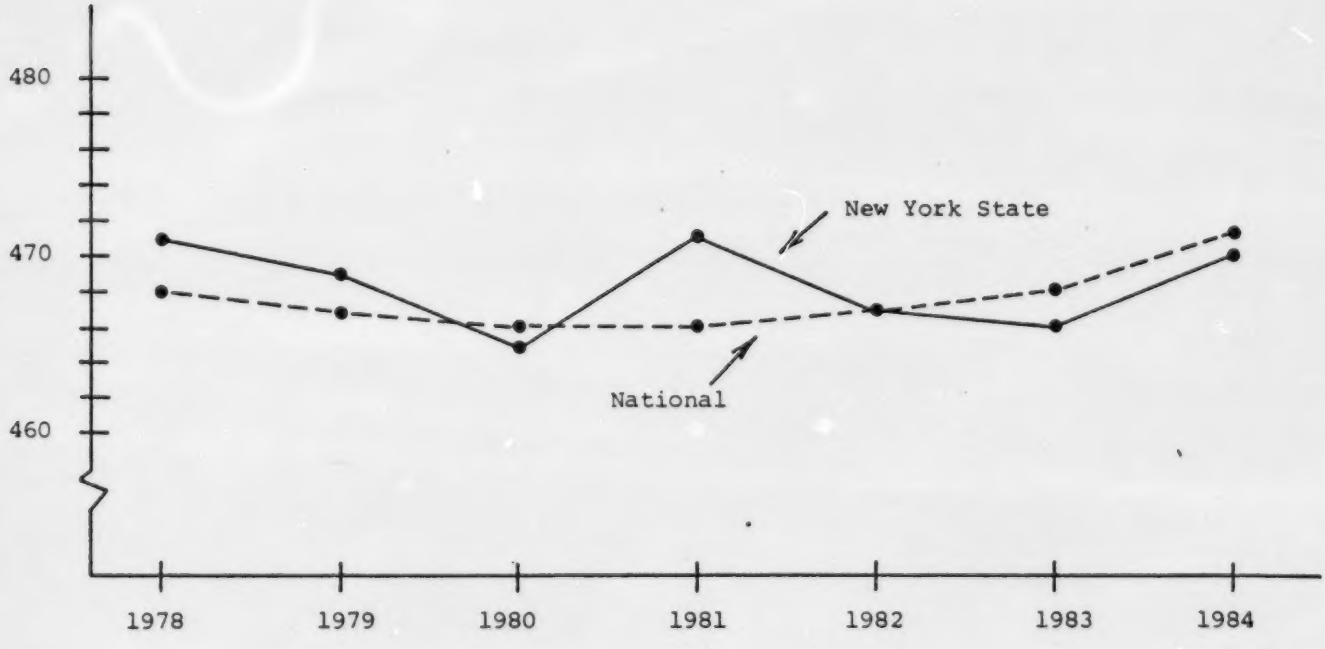


Figure 4: New York State and National Average Scores on the SAT-Mathematical, 1978-1984



New York's average scores for 1984 were higher than the 1983 scores but lower than the national averages. On the verbal test, New York's average score increased from 422 to 424; the national average score was 426. On the mathematical test, New York's average score increased from 466 to 470; the national average score was 471.

However, the percent of seniors taking the SAT's in New York State was almost twice the national average. New York's 133,000 examinees comprise 62 percent of the senior class, the fourth highest percentage among the states. Nationwide, only 33 percent of the seniors were tested. Thus, the average SAT scores earned by virtually all college-bound seniors in New York were about the same as those earned by a select group of college-bound seniors nationwide.

Table 4: Comparison of New York State and National Averages on the Scholastic Aptitude Test (SAT)

Test	New York State		National	
	1983	1984	1983	1984
Verbal	422	424	425	426
Mathematical	466	470	468	471

College Board Achievement Tests

The College Board's Admissions Testing Program also includes achievement tests, which are required by some colleges to supplement the SAT's. The achievement tests are rigorous tests and are offered in 14 different subject areas.

New York State students have always performed extremely well on the achievement tests, and 1984 was no exception. Table 5 indicates that the average score earned by New York's college-bound seniors on all tests combined was 16 points higher than the national average. New York's advantage ranged from 34 points in biology to 6 points in English composition.

Table 5: Comparison of New York State and National Averages on College Board Achievement Tests, 1984

Achievement Tests	Number Written in New York	Average Score		
		New York	National	Difference
English Composition	24,894	524	518	+6
Mathematics Level 1	21,239	569	542	+27
Biology	12,591	584	550	+34
Chemistry	7,354	597	573	+24
American History	5,006	552	521	+31
Mathematics Level 2	3,485	676	659	+17
Spanish	3,375	549	528	+21
French	2,603	559	544	+15
Physics	2,533	618	597	+21
Literature	2,012	531	521	+10
European History	409	565	548	+17
German	241	597	578	+19
Hebrew	204	644	625	+19
Latin	160	571	558	+13
All Tests Combined	86,106	553	537	+16

Other Programs

While the College Board's Admissions Testing Program allows comparisons only with a national average, which includes New York's scores, there are three nationwide programs in which New York can be compared directly with each of the other states. They are the Advanced Placement Program, the National Merit Scholarship Program, and the Westinghouse Science Talent Search.

The Advanced Placement Program of the College Board consists of courses of study and examinations in 24 subjects through which high school pupils may earn college credit and placement at approximately 2,000 postsecondary institutions throughout the country. About 177,000 pupils nationwide participated in this program last year.

The National Merit Scholarship Program is the nation's largest independently financed competition for college undergraduate scholarships. Each year more than one million pupils take the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test to enter the scholarship competition. About 35,000 are commended for their performance and 15,000 are named Semifinalists.

The Westinghouse Science Talent Search is an endeavor to discover among high school seniors those

who have the potential to become the research scientists and engineers of the future. The competition involves the judging of entries submitted by about 1,000 contestants. Winners of this competition, as well as those in the Honors Group, are frequently offered scholarships by colleges and universities.

New York State consistently holds a preeminent position in these three national programs. The most recent results are illustrated in Figure 5, which compares New York State pupils with pupils from California, a state of comparable size.

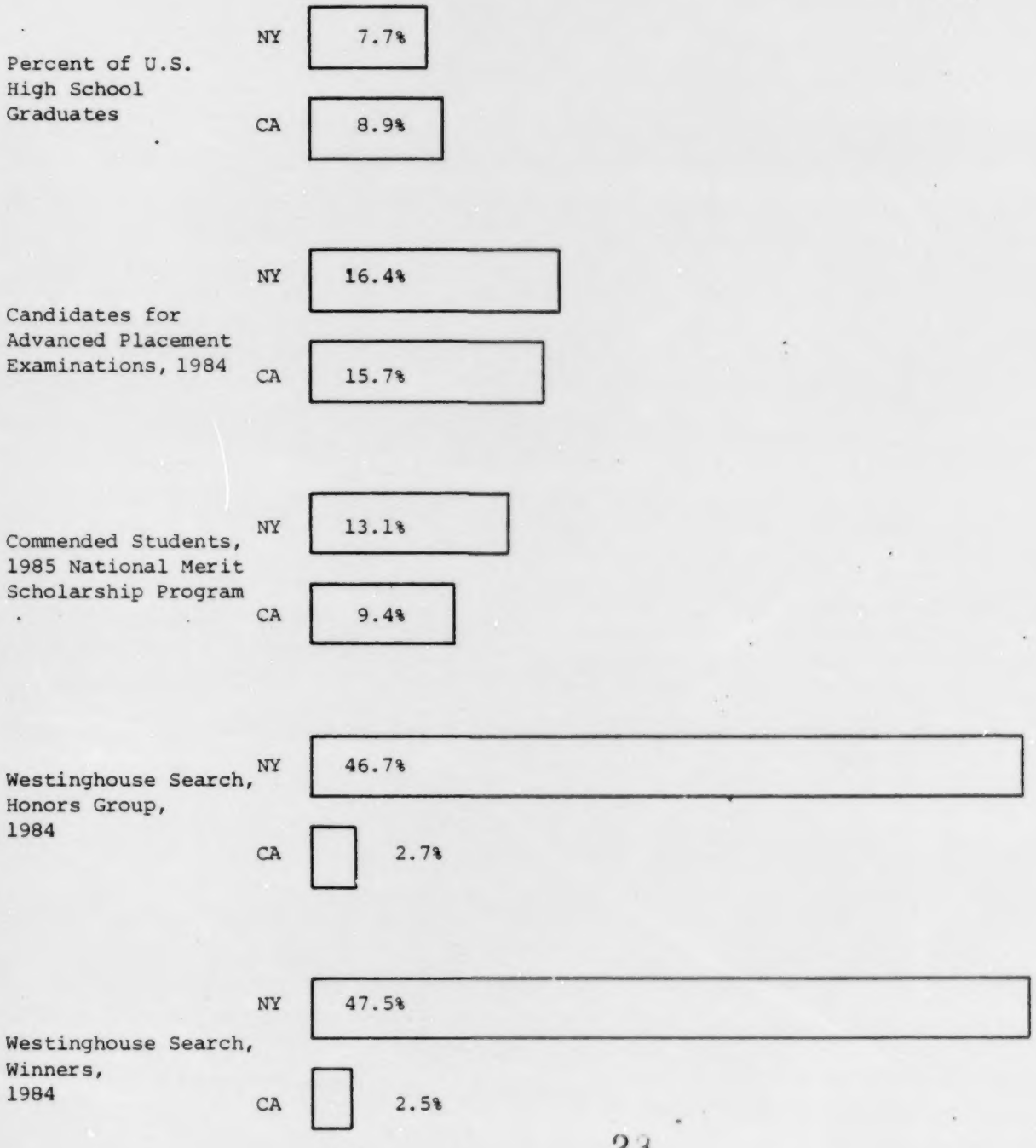
Although New York had a smaller percentage of the nation's high school graduates -- 7.7 percent as opposed to California's 8.9 percent -- New York had a higher percentage of pupils on each significant indicator of quality.

- Advanced Placement: New York had 16.4 percent of the candidates for Advanced Placement examinations; California had 15.7 percent.

- National Merit: New York had 13.1 percent of the Commended Students; California had 9.4 percent.

- Westinghouse: New York pupils comprised 46.7 percent of the Honors Group and 47.5 percent of the winners; California's pupils made up only 2.7 percent of the Honors Group and 2.5 percent of the winners.

Figure 5: Advanced Placement, National Merit, and Westinghouse Science Talent Search: New York and California Compared



Conclusion

During the 1983-84 school year, New York State's elementary and secondary school students demonstrated high achievement on all available indicators. The Pupil Evaluation Program results showed improvements in third-grade reading and mathematics and in fifth-grade writing. The percentage of students meeting the competency testing requirements for a high school diploma remained high, and the percentage of graduates receiving Regents diplomas increased over the preceding year.

New York State students compared very favorably with their peers in other states. They led the nation in the Westinghouse Science Talent Search and in participation in the Advanced Placement Program. They did extremely well in the National Merit Scholarship Competition, and they scored well above the national average on all College Board achievement tests. Their Scholastic Aptitude Test scores improved and remained close to the national average despite the high proportion of seniors tested.